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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,814	07/29/2003	Richard E. Staerzl	M09692	9028

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EXAMINER

BELL, BRUCE F

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/629,814	<b>Applicant(s)</b> STAERZL ET AL.	
	<b>Examiner</b> Bruce F. Bell	<b>Art Unit</b> 1746	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 10, 12 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8, 9, 11 and 13-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/29/03; 4/4/05</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 7, 16 and 17 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 7 fails to further limit the apparatus structure from that of the instant claim that it depends on. Applicants are reciting process steps on the operation of the apparatus which does not further limit the apparatus structure. Apparatus claims must rely on features, where as method claims rely on steps.

Claims 16 and 17 do not further limit the apparatus structure from that of the instant claim that they depend on. Applicants are citing process steps of how to manufacture the boat hull rather than reciting the apparatus features, which further limit the structure of the apparatus for inhibiting fouling of a submerged object. How the boat hull is made does not further limit the apparatus already having those features set forth in the claim on which the dependent claim depends.

### ***Claim Rejections - 35 USC § 112***

2. Claims 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 lacks antecedent basis for the phrase "said intermediate layer". The claim is further unclear with respect to whether this intermediate layer is a part of

the apparatus as set forth or not, since it appears that the claim recites process limitations for the manufacture of a boat hull rather than the apparatus for inhibiting fouling of a submerged object.

Claim 17 is vague and indefinite with respect to whether the first and second layers are disposed in the mold or on the ships hull from the instant claims as set forth. It appears that the first and second layers are already present in the independent claim 12 and therefore, claim 17 appears to be a process limitation on how to attach the layers, which does not further limit the structural aspect of the invention. Applicant's are reminded that apparatus claims must recited structural features to further limit the claims, where as process claims must recited methodical steps to further limit the claims. The mere recitation of process limitations in an apparatus claim does not further limit the structure of that apparatus claim, already having those features disclosed. The manner in which the structural features are formed, does not change the apparatus structure.

Claim 18 is vague and indefinite with respect to there being a second coating which appears to be deposited on the first coat, since only one electrode is disclosed. There also does not appear to be support in the specification for an embodiment as set forth by this instant claim. It appears that may be applicant's need to insert that a second electrode has a second coating. It appears that the instant invention discloses that the two coatings be attached to opposite portions of the ships hull and be electrically insulated therefrom, the claim as set forth leads one to believe that the two coats are connected to one another.

Correction and/or clarification are requested.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 7, 10, 12, 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staerzl (6206472) in combination with Harms et al (4196064).

Staerzl disclose a system for inhibiting marine organism growth on underwater surfaces wherein the hull of a watercraft that has a port and starboard sides is coated with an electrically conductive paint on the two outer surfaces of the hull, wherein the two coated surfaces are electrically insulated from one another, except for the electric current path through the water. An electrical conductor (electrode) is in electrical communication with the first electrically conductive paint and a second electrical conductor (electrode) is in electrical communication with the second electrically conductive paint. A controller is provided which alternately supplies electric current to flow from the first electrode to the second electrode through the water and then the polarity is reversed, so that degradation of the anodic surfaces is avoided. See col. 8, line 64 – col. 9, line 12; col. 9, lines 34-67.

Staerzl does not disclose that the electrically conductive polymer based material is a nonconductive polymer matrix with electrically conductive particles.

Harms et al disclose a structure exposed to a marine environment that is coated with a coating of stainless steel particles in a coating matrix of an inorganic polymer matrix. See abstract. Harms et al also disclose that other compositions for the marine coatings maybe used such as a polyisobutylene elastomer or other materials, and that the stainless steel particles are used in the coating matrix for the purpose of imparting electrical conductivity. See col. 4, lines 30-41. Specific organic polymers that may be used in the coating matrix such as tetrafluoroethylene resins, vinyl polymers, polyvinylene chloride and urethane polymers are disclosed. See col. 5, lines 22-41.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the instant invention was made because even though the prior art of Staerzl does not disclose the non-conductive polymer and conductive particles, the prior art of Harms et al discloses that it is known to the person having ordinary skill in the art to use non-conductive polymers in conjunction with conductive particles to form a coating that is utilized in marine environments for the purpose of preventing marine growth on objects that are exposed to a marine environment. Therefore, one having ordinary skill in the art, would have the ability to change the electrically conductive paint used in the Staerzl invention with that of the conductive particles and non-conductive polymer, since both coating materials appear to perform the same function in the art and would be recognized as functional equivalents.

***Allowable Subject Matter***

5. Claims 5, 6, 8, 9, 11, 13-15 are allowable over the prior art of record.
6. Claims 5, 6, 8, 9, 11, 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach and/or suggest the coating composition having a nonconductive polymer with graphite particles, a vinyl ester polymer with electrically conductive particles or a vinyl ester polymer with graphite particles. The prior art of record further fails to teach and/or suggest a boat hull having a fiberglass layer, a conductive layer and an intermediate layer having an electrode and first conducting layer disposed on the hull (submerged object).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BFB  
December 11, 2005

  
Bruce F. Bell  
Primary Examiner  
Art Unit 1746